Remarks/Arguments

The Office action indicates that claims 1, 4-10, and 12-14 are pending and stand rejected. Claims 1, 10, and 12 are independent. Claims 2, 3 and 11 were previously cancelled.

No claim amendments are presented in this response.

Claim rejections under 35 U.S.C. § 103

Claims 1, 4, and 5 stand rejected under 35 U.S.C. 103(a) as unpatentable over Adams (WO98/16040, hereinafter referred to as "Adams") and Knapp (US 6,005,904, hereinafter "Knapp"), further in view of Lydon (US 6,757,302, hereinafter "Lydon"). Claims 6-8 stand rejected over Adams, Knapp, and Lydon, and further in view of Lyle (US 7,295,578, hereinafter "Lyle"). Claim 10 over Scott (US 6,654,409, hereinafter "Scott") in view of Adams. Claims 12-14 over Fuller (US 7,662,021, hereinafter "Fuller") in view of Lydon. Applicants respectfully traverse these rejections.

In re Wada and Murphy, Appeal 2007-3733, the BPAI stated that:

> When determining whether a claim is obvious, an examiner must make "a searching comparison of the claimed invention – including all its limitations – with the teaching of the prior art." In re Ochiai, 71 F.3d 1565, 1572 (Fed. Cir. 1995) (emphasis added). Thus, "obviousness requires a suggestion of all limitations in a claim." CFMT, Inc. v. Yieldup Intern. Corp., 349 F.3d 1333, 1342 (Fed. Cir. 2003) (citing In re Royka, 490 F.2d 981, 985 (CCPA 1974)). Moreover, as the Supreme Court recently stated, "there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." KSR Int'l v. Teleflex Inc., 127 S. Ct. 1727, 1741 (2007) (quoting In re Kahn, 441 F.3d 977, 988 (Fed. Cir. 2006) (emphasis added)).

Applicants' specification as originally filed makes very clear that serial digital audio decoders extract little, if any, timing information from a stream of digital audio data. (Page 1, lines 22-25). As such, the claimed invention is directed to a method for extracting selected time information from a stream of serialized AES digital audio data.

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(Page 2, lines 4-5). Such extracted time information may be used for a wide variety of purposes, including, for example, encoding a stream of serialized AES digital audio data. (Page 11, lines 10-12). Another example is that the extracted time information could be forwarded to a plurality of target components, each of which would use the extracted time information during execution of a respective function. (Page 11, lines 16-18). In addition, the extracted time information could, for example, be used by the AES decoder itself to decode the received AES serialized digital audio data stream. (Page 11, lines 18-20).

Applicants' claim 1 requires:

A method for extracting selected time information from a stream of serialized AES digital audio data, comprising:
detecting, by a broadcast router, a first transition indicative of a first preamble of said stream of serialized AES digital audio data;
detecting, by the broadcast router, a second transition indicative of a subsequent preamble of said serialized AES digital audio data;
determining, by the broadcast router, a time separating said first and second transitions; and
transferring the _determined time_ to a decoding logic circuit for decoding said stream of serialized AES digital audio data _by utilizing the determined time_. Emphasis added.

The Office Action at page 3 relies on the combination of Adams and Knapp as allegedly disclosing the above emphasized features of claim 1. Applicants respectfully submit that the combination of Adams and Knapp do not teach or suggest transferring the determined time to a decoding logic circuit for decoding said stream of serialized AES digital audio data by utilizing the determined time, as set forth in claim 1.

Applicants respectfully present two separate and mutually exclusive counter-arguments for the Office Action's allegations above, either of which will independently overcome the §103 rejection to claim 1.

FIRST, the Office Action at page 3 alleges that Adams at page 1 lines 12-13 discloses transferring the determined time information to a decoding logic circuit. Applicants respectfully disagree.

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Adams relates to a circuit for decoding an input signal. Adams at page 1 lines 10-16 recites:

> Digital data communications have a wide variety of applications. One such application includes transmission and reception of digital audio data. Here, as in other applications, an input signal is processed by a receiver circuit. The receiver circuit decodes the input signal into a digital data stream together with a digital clocking signal corresponding to the data stream. Indeed, the frequency of the transmitted data may vary overtime. Accordingly, receiver circuits (also referred to as decoding circuits) should be capable of tracking changes in the clocking of the incoming data.

Although Adams may disclose that a decoding circuit decodes the input signal into a digital data stream together with a digital clocking signal corresponding to the data stream, this passage merely suggests the transfer of raw clocking data related to the data stream. Nowhere in Adams is the suggestion of transferring the determined time to a decoding logic circuit, as alleged by the Office action. Furthermore, in view of Adams, it would not be obvious for one of ordinary skill in the art to first determine a time separating said first and second transitions and then to transfer the determined time to a decoding logic circuit because Adams teaches that the "receiver circuits (also referred to as decoding circuits) should be capable of tracking changes in the clocking of the incoming data." (Adams, page 1 lines 15-16, emphasis added). In other words, the resources involved in Adams' tracking the changes of the incoming clock data is at the receiving end, not at the transmitting end. Therefore, it is not obvious in view of Adams to determine time and then transfer the determined time because Adams teaches just the opposite.

As explained above, Adams does not disclose or even suggest transferring the determined time to a decoding logic circuit. Knapp or Lydon do not cure this deficiency of Adams with respect to claim 1. As such, claim 1 is patentable over the combination of Adams, Knapp, and Lydon. Reconsideration of the §103 rejection to claim 1 is respectfully requested.

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SECOND, the Office Action at page 3 alleges that Knapp discloses "decoding the data by utilizing the determined time." Applicants respectfully point out that the Office's reliance on Knapp does not satisfy the full requirements of claim 1.

Knapp relates to a phase-locked loop (PLL) with protected output during instances when the PLL is unlocked. (Abstract). The cited area of Knapp at column 5 lines 1-28 discloses a decoder 42 at the receiver of a communication system, where the decoder continuously decodes the input signal and signals the occurrence of a pattern that matches a predetermined set of valid preambles. Decoder 42 is designed to decode a specific set of bits within the preambles. If that set of bits does not occur for a set period of time, possibly indicated by a certain count within counter 44, then the lock/unlock signal will indicate an unlock condition. Counter 44 is a modulo N counter where N clock cycles is the time period between preambles. If a valid preamble is detected after exactly N clock cycles, decoder 44 indicates one valid preamble has been detected.

In contrast, Applicants' claim 1 specifically requires, among other things, transferring the determined time to a decoding logic circuit for decoding said stream of serialized AES digital audio data by utilizing the determined time. Even if Knapp discloses decoding the data by utilizing the determined time, a point which Applicants do not concede, Knapp certainly does not disclose or suggest transferring the determined time to a decoding logic circuit for decoding said stream of serialized AES digital audio data by utilizing the determined time. While Knapp discloses a PLL in which a detection circuit is coupled to receive an input signal, nowhere does Knapp suggest the claimed invention.

Furthermore, in view of Knapp, it would not be obvious to one of ordinary skill in the art to achieve the claimed invention because Knapp's detection circuit is designed to receive signals, but not for transmitting or transferring the determined time to a decoding logic circuit for decoding said stream of serialized AES digital audio data by utilizing the determined time. Adams or Lydon do not cure this deficiency of Knapp with respect to claim 1. As such, for this independent reason, claim 1 is patentable over the combination

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of Adams, Knapp, and Lydon. Reconsideration of the §103 rejection to claim 1 is respectfully requested.

Claims 4 and 5 depend from allowable claim 1. Thus, claims 4 and 5 incorporate the features of claim 1, and are patentable for at least the same reasons as discussed above with respect to claim 1, with each dependent claim containing further distinguishing patentable features. Therefore, Applicants request withdrawal of the rejection to claims 4 and 5 under 35 U.S.C. 103(a).

Claims 6-8 depend from allowable claim 1. Thus, claims 6-8 incorporate the features of claim 1. The additional reference Lyle is cited as allegedly showing an encoder. However, Lyle does not show or suggest "transferring the determined time to a decoding logic circuit for decoding said stream of serialized AES digital audio data by utilizing the determined time," as recited in claim 1. Therefore, Lyle does not cure the deficiencies of the combination of Adams, Knapp, and Lydon as pointed out above. Therefore, Applicants request withdrawal of the rejection to claims 6-8 under 35 U.S.C. 103(a).

Independent claim 10 recites an apparatus and includes the features of "utilizing said extracted time information to decode said received stream of serialized AES digital audio data."

In rejecting Applicants' claim 10, the examiner relies on the Scott patent, which, at Col. 15, lines 24-36, teaches a clock recovery circuit within an isolation system for terminating a phone line. A decoder section within the clock recovery circuit separates time-division multiplexed (TDM) data and control information. Other circuitry receives the digital control output, including a synchronous data signal. However, neither Scott, nor Adams, separately or in combination, discloses utilizing said extracted time information to decode said received stream of serialized AES digital audio data, as recited in claim 10.

In the Office Action at page 7, the Office points to Scott at Col. 15, lines 30-32 as allegedly showing these features. However, a review of the cited section finds that the recovered clock operates as the time base for decoder 708. However, decoder 708

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separates the time division multiplexed data and control information, providing digital control output 732 to other circuitry.

This is different from the claimed invention which recites utilizing said extracted time information to decode said received stream of serialized AES digital audio data. Decoder 708 of Scott separates time division multiplexed data and control information, which is different from the claimed to decode said received stream of serialized AES digital audio data. Furthermore, Adams likewise fails to teach the claimed features as pointed out above.

Accordingly, Applicants submit that Claim 10 patentably distinguishes over the combination of Scott and Adams and the rejection should be withdrawn.

Applicants' claim 12 recites:

> A method for extracting selected time information from a stream of serialized AES digital audio data, comprising:
> detecting, by a broadcast router, a first transition of the stream of serialized AES digital audio data;
> counting, by a broadcast router, a number of transitions of the serialized AES digital audio data from the first transition until the number of transition reaches a count of 33;
> counting a number of clock pulses of a clock from the detecting of the first transition of the serialized AES digital audio data until the number of transitions reaches the count of 33; and
> outputting the clock count to a decoding logic circuit.
> Emphasis added.

The Office Action starting at the bottom of page 8 concedes that Fuller does not disclose that the interval between the preambles has been determined by counting a number of transitions of the serializer AES digital audio data from the first transition until the number of transition reaches a count of 33. In support of the §103 rejection to claim 12, the Office alleges that Lydon at Col. 1, lines 25-35 discloses that the AES sub-frame contains 32 bits starting with a preamble, and concludes that it would have been obvious to one of ordinary skill in the art at the time of invention to count the number of transitions of the AES signal from the first transition until the number of transitions reaches a count of 33. Applicants respectfully disagree with this conclusion.

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Lydon relates generally to a channel status management for multichannel audio distribution. Although Lydon, at Col. 1 lines 26-27, discloses that each subframe of the AES3 data stream has 32 bits, Applicants respectfully assert that, in view of Lydon, it would not be obvious to one of ordinary skill in the art to count the number of transactions of the serialized AES digital audio data from the first transition until the number of transition reaches a count of 33, for the simple reason that Lydon teaches away from counting to 33.

A careful reading of Lydon reveals that Lydon explicitly teaches counting the number of transitions until the count reaches 32. Lydon at column 4 lines 54-56 recites:

The counter 22 counts to 32 between successive rising edges. . . .
Emphasis added.

Although Lydon teaches counting to 32 between successive rising edges, nowhere does Lydon disclose, teach, or even suggest counting the number of transitions of the serialized AES digital audio data from the first transition until the number of transitions reaches a count of 33. Accordingly, Applicants submit that Claim 12 patentably distinguishes over the combination of Fuller and Lydon and the rejection should be withdrawn.

Claims 13 and 14 depend from allowable claim 12. Thus, claims 13 and 14 incorporate the features of claim 12, and are patentable for at least the same reasons as discussed above with respect to claim 12, with each dependent claim containing further distinguishing patentable features. Therefore, Applicants request withdrawal of the rejection to claims 13 and 14 under 35 U.S.C. 103(a).

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Conclusion

In view of the foregoing, Applicants solicit entry of this amendment and allowance of the claims. If the Examiner cannot take such action, the Examiner should contact the Applicants' attorney at (609) 734-6820 to arrange a mutually convenient date and time for a telephonic interview.

No fees are believed due with regard to this Amendment. However, if there is a fee, please charge the fee or credit any overpayment to Deposit Account No. 07-0832.

Respectfully submitted,
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